

# Andrew Markham

## List of Publications by Year in descending order

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Version: 2024-02-01

108  
papers

4,246  
citations

279798

23  
h-index

265206

42  
g-index

108  
all docs

108  
docs citations

108  
times ranked

3170  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | RandLA-Net: Efficient Semantic Segmentation of Large-Scale Point Clouds. , 2020, , .   |      | 776       |
| 2  | Visual SLAM and Structure from Motion in Dynamic Environments. ACM Computing Surveys, 2019, 51, 1-36.  | 23.0 | 253       |
| 3  | Non-Line-of-Sight Identification and Mitigation Using Received Signal Strength. IEEE Transactions on Wireless Communications, 2015, 14, 1689-1702.   | 9.2  | 211       |
| 4  | VidLoc: A Deep Spatio-Temporal Model for 6-DoF Video-Clip Relocalization. , 2017, , .  |      | 145       |
| 5  | mID: Tracking and Identifying People with Millimeter Wave Radar. , 2019, , .   |      | 145       |
| 6  | 3D Object Reconstruction from a Single Depth View with Adversarial Learning. , 2017, , .   |      | 122       |
| 7  | Evolution and sustainability of a wildlife monitoring sensor network. , 2010, , .  |      | 109       |
| 8  | GANVO: Unsupervised Deep Monocular Visual Odometry and Depth Estimation with Generative Adversarial Networks. , 2019, , .                            |      | 89        |
| 9  | Lightweight map matching for indoor localisation using conditional random fields. , 2014, , .  |      | 85        |
| 10 | Selective Sensor Fusion for Neural Visual-Inertial Odometry. , 2019, , .   |      | 80        |
| 11 | See through smoke. , 2020, , .   |      | 76        |
| 12 | Deep-Learning-Based Pedestrian Inertial Navigation: Methods, Data Set, and On-Device Inference. IEEE Internet of Things Journal, 2020, 7, 4431-4441. | 8.7  | 75        |
| 13 | AtLoc: Attention Guided Camera Localization. Proceedings of the AAAI Conference on Artificial Intelligence, 2020, 34, 10393-10401.                   | 4.9  | 73        |
| 14 | Dense 3D Object Reconstruction from a Single Depth View. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2019, 41, 2820-2834.        | 13.9 | 72        |
| 15 | Underground Localization in 3-D Using Magneto-Inductive Tracking. IEEE Sensors Journal, 2012, 12, 1809-1816.   | 4.7  | 69        |
| 16 | Robust Attentional Aggregation of Deep Feature Sets for Multi-view 3D Reconstruction. International Journal of Computer Vision, 2020, 128, 53-73.    | 15.6 | 68        |
| 17 | WILDSENSING. ACM Transactions on Sensor Networks, 2012, 8, 1-33.   | 3.6  | 63        |
| 18 | Deep learning for fast simulation of seismic waves in complex media. Solid Earth, 2020, 11, 1527-1549.   | 2.8  | 63        |

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|----|--|------|-----------|
| 19 | Magneto-inductive networked rescue system (MINERS). , 2012, , .  |      | 59        |
| 20 | Distilling Knowledge From a Deep Pose Regressor Network. , 2019, , .   |      | 58        |
| 21 | Revealing the hidden lives of underground animals using magneto-inductive tracking. , 2010, , .  |      | 53        |
| 22 | Zero-Velocity Detectionâ€”A Bayesian Approach to Adaptive Thresholding. , 2019, 3, 1-4.  |      | 53        |
| 23 | milliEgo. , 2020, , .  |      | 53        |
| 24 | Milli-RIO: Ego-Motion Estimation With Low-Cost Millimetre-Wave Radar. IEEE Sensors Journal, 2021, 21, 3314-3323.                                       | 4.7  | 52        |
| 25 | Distortion Rejecting Magneto-Inductive Three-Dimensional Localization (MagLoc). IEEE Journal on Selected Areas in Communications, 2015, 33, 2404-2417. | 14.0 | 51        |
| 26 | Impact of Rocks and Minerals on Underground Magneto-Inductive Communication and Localization. IEEE Access, 2016, 4, 3999-4010.                         | 4.2  | 49        |
| 27 | Robust pedestrian dead reckoning (R-PDR) for arbitrary mobile device placement. , 2014, , .  |      | 47        |
| 28 | Learning with Training Wheels: Speeding up Training with a Simple Controller for Deep Reinforcement Learning. , 2018, , .                              |      | 47        |
| 29 | Climate and the Individual: Inter-Annual Variation in the Autumnal Activity of the European Badger (Meles meles). PLoS ONE, 2014, 9, e83156.           | 2.5  | 43        |
| 30 | Deep Neural Network Based Inertial Odometry Using Low-Cost Inertial Measurement Units. IEEE Transactions on Mobile Computing, 2021, 20, 1351-1364.     | 5.8  | 42        |
| 31 | Robust Indoor Positioning With Lifelong Learning. IEEE Journal on Selected Areas in Communications, 2015, 33, 2287-2301.                               | 14.0 | 40        |
| 32 | Indoor Tracking Using Undirected Graphical Models. IEEE Transactions on Mobile Computing, 2015, 14, 2286-2301.   | 5.8  | 39        |
| 33 | Use of tri-axial accelerometers to assess terrestrial mammal behaviour in the wild. Journal of Zoology, 2016, 298, 257-265.                            | 1.7  | 37        |
| 34 | Underground Incrementally Deployed Magneto-Inductive 3-D Positioning Network. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 4376-4391. | 6.3  | 37        |
| 35 | DeepTIO: A Deep Thermal-Inertial Odometry With Visual Hallucination. IEEE Robotics and Automation Letters, 2020, 5, 1672-1679.                         | 5.1  | 37        |
| 36 | SelfVIO: Self-supervised deep monocular Visualâ€”Inertial Odometry and depth estimation. Neural Networks, 2022, 150, 119-136.                          | 5.9  | 36        |

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|----|---|------|-----------|
| 37 | DeepPCO: End-to-End Point Cloud Odometry through Deep Parallel Neural Network. , 2019, , .  |      | 34        |
| 38 | SensatUrban: Learning Semantics from Urban-Scale Photogrammetric Point Clouds. International Journal of Computer Vision, 2022, 130, 316-343.  | 15.6 | 34        |
| 39 | MotionTransformer: Transferring Neural Inertial Tracking between Domains. Proceedings of the AAAI Conference on Artificial Intelligence, 2019, 33, 8009-8016.   | 4.9  | 32        |
| 40 | Learning Monocular Visual Odometry through Geometry-Aware Curriculum Learning. , 2019, , .  |      | 31        |
| 41 | Heart Rate Sensing with a Robot Mounted mmWave Radar. , 2020, , .   |      | 30        |
| 42 | A new Magnetoâ€nductive tracking technique to uncover subterranean activity: what do animals do underground?. Methods in Ecology and Evolution, 2015, 6, 510-520.   | 5.2  | 27        |
| 43 | Fusion of Radio and Camera Sensor Data for Accurate Indoor Positioning. , 2014, , .   |      | 26        |
| 44 | Human tracking and identification through a millimeter wave radar. Ad Hoc Networks, 2021, 116, 102475.  | 5.5  | 24        |
| 45 | Learning With Stochastic Guidance for Robot Navigation. IEEE Transactions on Neural Networks and Learning Systems, 2021, 32, 166-176.   | 11.3 | 23        |
| 46 | CARACAL: a versatile passive acoustic monitoring tool for wildlife research and conservation. Bioacoustics, 2021, 30, 41-57.  | 1.7  | 23        |
| 47 | Identification and mitigation of non-line-of-sight conditions using received signal strength. , 2013, , .   |      | 22        |
| 48 | An activeâ€radioâ€frequencyâ€identification system capable of identifying coâ€locations and socialâ€structure: Validation with a wild freeâ€ranging animal. Methods in Ecology and Evolution, 2017, 8, 1822-1831. | 5.2  | 22        |
| 49 | Accurate Positioning via Cross-Modality Training. , 2015, , .   |      | 21        |
| 50 | Listening to Lions: Animal-Borne Acoustic Sensors Improve Bio-logger Calibration and Behaviour Classification Performance. Frontiers in Ecology and Evolution, 2018, 6, .   | 2.2  | 20        |
| 51 | Discrete Gene Regulatory Networks &#40;dGRNs&#41;; A Novel Approach to Configuring Sensor Networks. , 2010, , .   |      | 19        |
| 52 | Tracking People in Highly Dynamic Industrial Environments. IEEE Transactions on Mobile Computing, 2017, 16, 2351-2365.  | 5.8  | 19        |
| 53 | Snoopy. , 2018, 1, 1-29.  |      | 19        |
| 54 | DynaNet: Neural Kalman Dynamical Model for Motion Estimation and Prediction. IEEE Transactions on Neural Networks and Learning Systems, 2021, 32, 5479-5491.  | 11.3 | 19        |

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 55 | The Adaptive Social Hierarchy - A Self Organizing Network Based on Naturally Occurring Structures. , 2006, , .  |      | 18        |
| 56 | Human Interactive Secure ID Management in Body Sensor Networks. Journal of Networks, 2012, 7, .   | 0.4  | 18        |
| 57 | PointLoc: Deep Pose Regressor for LiDAR Point Cloud Localization. IEEE Sensors Journal, 2022, 22, 959-968.  | 4.7  | 18        |
| 58 | Wildlife and environmental monitoring using RFID and WSN technology. , 2009, , .  |      | 16        |
| 59 | Human interactive secure key and identity exchange protocols in body sensor networks. IET Information Security, 2013, 7, 30-38.   | 1.7  | 16        |
| 60 | In situ behavioral plasticity as compensation for weather variability: implications for future climate change. Climatic Change, 2018, 149, 457-471.                         | 3.6  | 16        |
| 61 | Graph-Based Thermalâ€™Inertial SLAM With Probabilistic Neural Networks. IEEE Transactions on Robotics, 2022, 38, 1875-1893.   | 10.3 | 16        |
| 62 | Accuracy Estimation for Sensor Systems. IEEE Transactions on Mobile Computing, 2015, 14, 1330-1343.   | 5.8  | 15        |
| 63 | Wirelessly Powered Embedded Sensor Nodes for Internal Structural Health Monitoring. IEEE Transactions on Industrial Electronics, 2021, , 1-1.                               | 7.9  | 15        |
| 64 | SCAN. , 2017, , .   |      | 13        |
| 65 | Magnetic Induction-Based Positioning in Distorted Environments. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 4605-4612.                                    | 6.3  | 12        |
| 66 | VeriNet. , 2017, , .  |      | 12        |
| 67 | Deepauth. , 2018, , .   |      | 12        |
| 68 | Vocal discrimination of African lions and its potential for collar-free tracking. Bioacoustics, 2021, 30, 575-593.  | 1.7  | 12        |
| 69 | DeepAoANet: Learning Angle of Arrival From Software Defined Radios With Deep Neural Networks. IEEE Access, 2022, 10, 3164-3176.   | 4.2  | 12        |
| 70 | 3-D Displacement Measurement for Structural Health Monitoring Using Low-Frequency Magnetic Fields. IEEE Sensors Journal, 2017, 17, 1165-1174.                               | 4.7  | 10        |
| 71 | Getting to the core: Internal body temperatures help reveal the ecological function and thermal implications of the lionsâ€™ mane. Ecology and Evolution, 2017, 7, 253-262. | 1.9  | 10        |
| 72 | FootSLAM meets Adaptive Thresholding. IEEE Sensors Journal, 2020, , 1-1.  | 4.7  | 10        |

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|----|---|------|-----------|
| 73 | Robust vision-based indoor localization. , 2015, , .  |      | 8         |
| 74 | GraphTinker: Outlier rejection and inlier injection for pose graph SLAM. , 2017, , .  |      | 8         |
| 75 | Seismic localization of elephant rumbles as a monitoring approach. Journal of the Royal Society Interface, 2021, 18, 20210264.                | 3.4  | 8         |
| 76 | 3D-PhysNet: Learning the Intuitive Physics of Non-Rigid Object Deformations. , 2018, , .  |      | 8         |
| 77 | Increasing the efficiency of 6-DoF visual localization using multi-modal sensory data. , 2016, , .  |      | 7         |
| 78 | Autonomous Learning for Face Recognition in the Wild via Ambient Wireless Cues. , 2019, , .   |      | 7         |
| 79 | SnapNav: Learning Mapless Visual Navigation with Sparse Directional Guidance and Visual Reference. , 2020, , .                                |      | 7         |
| 80 | Learning Selective Sensor Fusion for State Estimation. IEEE Transactions on Neural Networks and Learning Systems, 2024, , 1-15.               | 11.3 | 7         |
| 81 | Autonomous Learning of Speaker Identity and WiFi Geofence From Noisy Sensor Data. IEEE Internet of Things Journal, 2019, 6, 8284-8295.        | 8.7  | 6         |
| 82 | Body sensor network key distribution using human interactive channels. , 2011, , .  |      | 5         |
| 83 | Characterization of non-line-of-sight (NLOS) bias via analysis of clutter topology. , 2012, , .   |      | 5         |
| 84 | Comparison of Accuracy Estimation Approaches for Sensor Networks. , 2013, , .   |      | 5         |
| 85 | Reducing magneto-inductive positioning errors in a metal-rich indoor environment. , 2015, , .   |      | 5         |
| 86 | iMag: Accurate and Rapidly Deployable Inertial Magneto-Inductive Localisation. , 2018, , .  |      | 5         |
| 87 | DEFO-NET: Learning Body Deformation Using Generative Adversarial Networks. , 2018, , .  |      | 5         |
| 88 | The influence of spatial features and atmospheric conditions on African lion vocal behaviour. Animal Behaviour, 2021, 174, 63-76.             | 1.9  | 5         |
| 89 | Acoustic localisation of wildlife with low-cost equipment: lower sensitivity, but no loss of precision. Wildlife Research, 2022, 49, 372-381. | 1.4  | 5         |
| 90 | Learning 3D Scene Semantics and Structure from a Single Depth Image. , 2018, , .  |      | 4         |

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|-----|---|------|-----------|
| 91  | Map-aided Navigation for Emergency Searches. , 2019, , .  |      | 4         |
| 92  | You Only Train Once: Learning General and Distinctive 3D Local Descriptors. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, , 1-18. | 13.9 | 4         |
| 93  | Deep Odometry Systems on Edge with EKF-LoRa Backend for Real-Time Indoor Positioning. , 2022, , .   |      | 4         |
| 94  | Sensor Fusion for Magneto-Inductive Navigation. IEEE Sensors Journal, 2020, 20, 386-396.  | 4.7  | 3         |
| 95  | Multiscale Human Activity Recognition and Anticipation Network. IEEE Transactions on Neural Networks and Learning Systems, 2024, 35, 451-465.             | 11.3 | 3         |
| 96  | Towards Self-supervised Face Labeling via Cross-modality Association. , 2017, , .   |      | 2         |
| 97  | Towards an enterprise architecture controlling framework. , 2018, , .   |      | 2         |
| 98  | Distributed Communicating Neural Network Architecture for Smart Environments. , 2019, , .   |      | 2         |
| 99  | Learning distributed communication and computation in the IoT. Computer Communications, 2020, 161, 150-159.   | 5.1  | 2         |
| 100 | iMag+: An Accurate and Rapidly Deployable Inertial Magneto-Inductive SLAM System. IEEE Transactions on Mobile Computing, 2022, 21, 3644-3655.             | 5.8  | 2         |
| 101 | RePWR. , 2016, , .  |      | 1         |
| 102 | Identifying Sources and Sinks in the Presence of Multiple Agents with Gaussian Process Vector Calculus. , 2018, , .                                       |      | 1         |
| 103 | Advances and Challenges in Underground Sensing. , 2018, , 357-415.  |      | 1         |
| 104 | iSCAN. , 2019, , .  |      | 1         |
| 105 | Indoor positioning system in visually-degraded environments with millimetre-wave radar and inertial sensors. , 2020, , .                                  |      | 1         |
| 106 | Magneto-inductive tracking of underground animals. , 2010, , .  |      | 0         |
| 107 | Automatic Face Recognition Adaptation via Ambient Wireless Identifiers. , 2018, , .   |      | 0         |
| 108 | Deep Emergent Communication for the IoT. , 2020, , .  |      | 0         |